## (19) World Intellectual Property Organization

International Bureau



## 1 DERIK KANDERIK DERIKA KERIK BERKA BERKA BERKA DI 11 MERIKATUAN BERKA DIRIK BERKA BERKA BERKA BERKA BERKA BER

(43) International Publication Date 12 February 2004 (12.02.2004)

PCT

# (10) International Publication Number WO 2004/013246 A1

- (51) International Patent Classification<sup>7</sup>: C09J 133/06 // (C09J 133/06, 133:06) (C09J 133/06, 171:02) (C09J 133/06, 175:04) (C09J 133/06, 167:02)
- (21) International Application Number:

PCT/EP2003/007365

(22) International Filing Date:

9 July 2003 (09.07.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

10/208,103

31 July 2002 (31.07.2002) US

- (71) Applicant (for all designated States except US): UCB, S.A. [BE/BE]; Allée de la Recherche 60, B-1070 Bruxelles (BE).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): LU, Xinya [US/US]; 60 Parkside Circle, Marietta, GA 30068 (US).
- (74) Agent: ROELANTS, François; UCB, S.A., Intellectual Property Dept., Allée de la Recherche 60, B-1070 Bruxelles (BE).

- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Ó

#### (54) Title: ACRYLIC PRESSURE SENSITIVE ADHESIVES

(57) Abstract: The present invention concerns solvent-based acrylic pressure sensitive adhesives and hot melt (or solvent-less) acrylic pressure sensitive adhesives comprising a solution or misible blend of a. at least one hydrophobic (meth) acrylic polymer, b. at least one substantially water insoluble polyol having a number average molecular weight of from 1,000 to 20,000 and selected from the group consisting of polyester polyols, acrylic polyols, polycarbonate polyols and polyether polyols. c. at least one transition metal complex as cross-linking agent, d. optionally one or more tackifying resins, g. optionally one or more solvents. h. optionally one or more of plasticizers, adhesion promoters, pigments, fillers, antioxidants and UV stabilizers. It employs polyols which are substantially insoluble in water and miscible with the acrylic polymer used in the adhesive composition.

## INTERNATIONAL SEARCH REPORT

Intermonal Application No PCT/EP 03/07365

I A. CLASS	SIFICATION OF SUBJECT MATTER				
IPC 7	C09J133/06 //(C09J133/06,133:06),(C09J133/ (C09J133/06,167:02)		75:04)		
1	to International Patent Classification (IPC) or to both national class S SEARCHED	ssification and IPC			
Minimum d	ocumentation searched (classification system followed by classi	ification symbols)	· · · · · · · · · · · · · · · · · · ·		
1PC /			•		
	tion searched other than minimum documentation to the extent t				
EPO-In	lata base consulted during the international search (name of dat	ta base and, where practical, search terms used	<b>(1)</b>		
C. DOCUM	ENTS CONSIDERED TO BE RELEVANT	<del></del>			
Category °	Citation of document, with indication, where appropriate, of the	e relevant passages	Relevant to claim No.		
Υ	WO 92 10553 A (LOHMANN GMBH & CO KG) 25 June 1992 (1992-06-25) page 4, line 10 - line 12		3,9		
Y	EP 0 707 041 A (BASF CORP) 17 April 1996 (1996-04-17) claims	3,9			
T .	"Handbook of Chemistry and Phys 56th Edition"," 1975, WEAST, ROBERT C, , CLEVE XP002262840 CRC Press page 2 periodic table		1,4		
Furth	er documents are listed in the continuation of box C.	X Patent family members are listed in	n annex.		
Special cate	egories of cited documents :				
'A" documen	at defining the general state of the art which is not	"T* later document published after the inten or priority date and not in conflict with the	he application but		
COLISION	red to be of particular relevance ocument but published on or after the international	clied to understand the principle or the invention			
tiling da L" documen'	te t which may throw doubts on priority claim(s) or cited to establish the publication date of another	"X" document of particular relevance; the cla cannot be considered novel or cannot to involve an inventive step when the docu-	oe considered to ument is taken alone		
citation	or other special reason (as specified) at referring to an oral disclosure, use, exhibition or	"Y" document of particular relevance; the cla cannot be considered to involve an inve	entive ctan when the		
other me	eans	ments, such combination being obvious	e other, such docu-		
later tha	t published prior to the international filling date but n the priority date claimed	in the art. "&" document member of the same patent fa	document member of the same patent family		
Date of the ac	ctual completion of the international search	Date of mailing of the international seam	ch report		
26	November 2003	10/12/2003			
lame and ma	illing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2	Authorized officer			
	NL – 2280 HV Rijswijk	·			
	Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Schueler, D			

### FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 1

Present claim 1 relates to an extremely large number of possible compounds/products. In fact, the claim contain so many options, variables, possible permutations and provisos that a lack of clarity (and conciseness) within the meaning of Article 6 PCT arises to such an extent as to render a meaningful search of the claims impossible. Consequently, the search has been carried out for those parts of the application which do appear to be clear (and concise), namely compounds/products have been searched e.g. those compounds/products recited in the examples and closely related homologous compounds mentioned in the description on pages 3-4; claim 3.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

## INTERNATIONAL SEARCH REPORT

PCT/EP 03/07365

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)
This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:
Claims Nos.:     because they relate to subject matter not required to be searched by this Authority, namely:
2. X Claims Nos.:  1 because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:  See FURTHER INFORMATION sheet PCT/ISA/210
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).
Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)
This International Searching Authority found multiple inventions in this international application, as follows:
As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
Remark on Protest  The additional search fees were accompanied by the applicant's protest.  No protest accompanied the payment of additional search fees.

## INTERNATIONAL SEARCH REPORT

Information on patent family members

Interponal Application No PCT/EP 03/07365

Patent document		Publication		Data Africa	Publication
cited in search report		date		Patent family member(s)	Publication date
WO 9210553	Α	25-06-1992	DE	4039780 C1	06-08-1992
			DE	4219368 Al	16-12-1993
			DE	59309868 D1 .	16-12 <b>-</b> 1999
			DE	59108010 D1	<b>2</b> 2-08-1 <b>99</b> 6
			WO	9325627 Al	23-12-1993
			WO	9210553 Al	25-06-1992
			ΑT	140472 T	15-08 <b>-</b> 1996
			ΑT	186560 T	15-11-1999
•			DK	561854 T3	25-11-1996
			EP	<b>056</b> 1854 A1	29-09-1993
			EP	0644920 Al	29-03-1995
			ES	2092087 T3	16-11-1996
			GR	3032522 T3	31-05-2000
			GR	3020968 T3	31-12-1996
			US	5433892 A	18-07-1995
			DK	644920 T3	15-05-2000
			ES	2141158 T3	16-03-2000
· ·			PT	644920 T	28-04-2000
EP 0707041	Α	17-04-1996	US	5605949 A	25-02-1997
			UΑ	3314895 A	26-04-1996
			CA	2160220 A1	12-04-1996
			CN	1129230 A	21-08-1996
			EP	0707041 A1	17-04-1996
			FI	954817 A	12-04-1996
			JP	8176513 A	09-07-1996
			US	5601879 A	11-02-1997